

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
28 July 2005 (28.07.2005)

PCT

(10) International Publication Number
WO 2005/067800 A1

(51) International Patent Classification⁷: **A61B 8/00**,
5/06, G06T 7/00

(21) International Application Number:
PCT/CA2005/000032

(22) International Filing Date: 12 January 2005 (12.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/535,825 13 January 2004 (13.01.2004) US

(71) Applicant (for all designated States except US): **RO-BARTS RESEARCH INSTITUTE** [CA/CA]; P.O. Box 5015, 100 Perth Drive, London, Ontario N6A 5K8 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GARDI, Lori Anne** [CA/CA]; 1459 Oakdale Street, London, Ontario N5X 1J5 (CA). **DOWNEY, Donal B.** [CA/CA]; 167 Camden Cres., London, Ontario N5X 2J6 (CA). **FENSTER, Aaron** [CA/CA]; 107 Ambleside Drive, London, Ontario N6G 4N9 (CA).

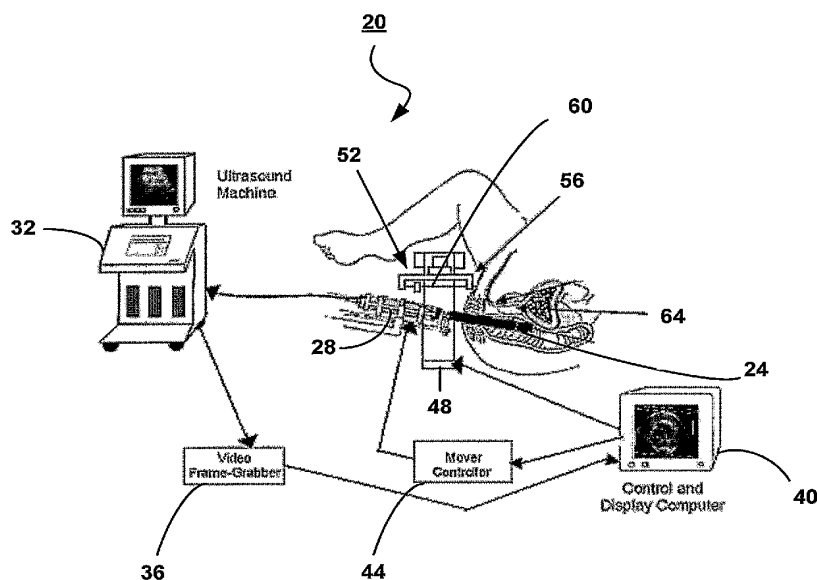
(74) Agents: **CLEMENTONI, Marco M.** et al.; Sim & McBurney, 6th Floor, 330 University Avenue, Toronto, Ontario M5G 1R7 (CA).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: AN ULTRASOUND IMAGING SYSTEM AND METHODS OF IMAGING USING THE SAME



(57) Abstract: A method of registering the position of an object moving in a target volume in an ultrasound imaging system includes capturing a first ultrasound image of a target volume. A second ultrasound image of the target volume is then captured after the capturing of the first ultrasound image. The position of the object in the target volume is identified using differences detected between the first and second ultrasound images. In another aspect, a region of interest in the target volume is determined. A segment of an operational scan range of a transducer of the ultrasound imaging system encompassing the region of interest is determined. The transducer is focused on the segment of the operational scan range during image capture.

WO 2005/067800 A1



Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.